X4-A9.1/103

DEPARTMENT OF THE ARMY
UNITED STATES ARMY ELECTRONICS COMMAND
FORT MONMOUTH, NEW JERSEY 07703

IN REPLY REFER TO:
AMSEL-ML-D

17 MAY 1966

Mr. John B. Booth
Chairman ASA X4-A9.1
Project Director
Teletype Corporation
5555 Touhy Avenue
Skokie, Illinois 60076

Dear Mr. Booth:

Mr. William F. Huf of the Navy Department has advised me of the ASA Subcommittee X4-A9.1 request that each member submit a keyboard arrangement(s) to implement ASCII by the next meeting in Chicago. Mr. Huf has asked me as Chairman, Military Communication System Technical Standards Committee (MCSTSC) to provide keyboard arrangements approved by the MCSTSC.

Inclosure 1 is the DOD standard keyboard appearing in Change Notice 1 to MIL-STD-188B. Inclosure 2 is the MCSTSC position on keyboards from a standardization viewpoint.

Inclosure 3 is a proposed numeric cluster keyboard.

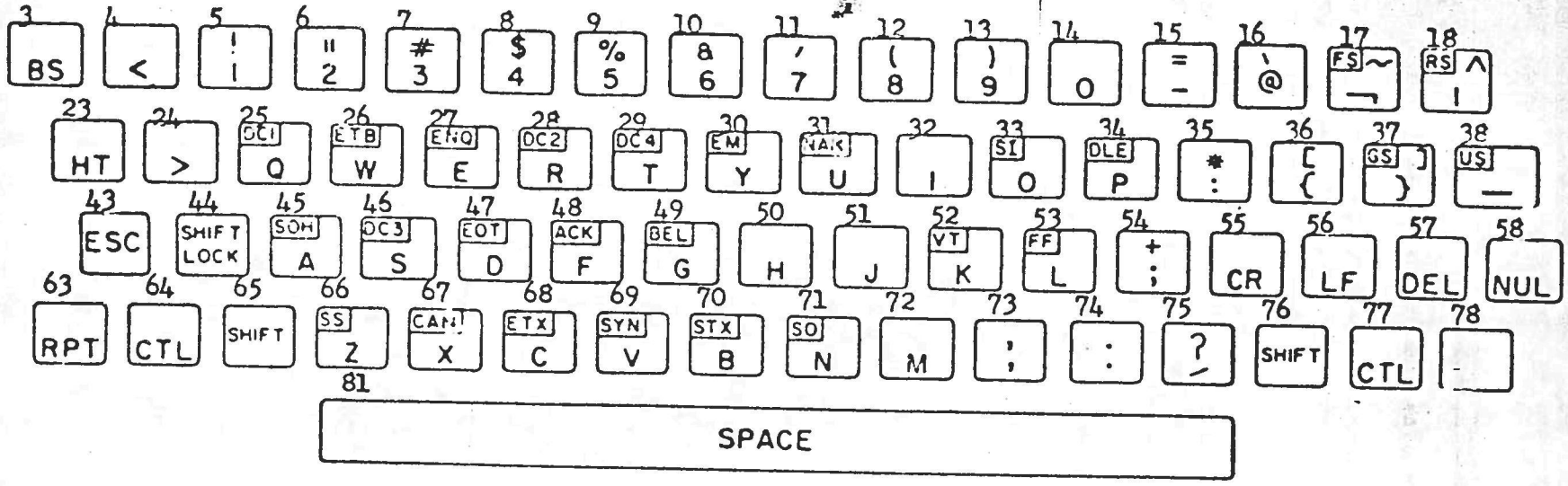
Sincerely yours,

ROBERT E. SOKIN
Chairman, Military Communication
System Technical Standards Committee

3 Incl
1. DOD Std Keyboard (25 cys)
2. MCSTSC Position on Keyboards (25 cys)
3. Prop Numeric Cluster Keyboard (25 cys)

DOD KEYBOARD

MIL-STD-188B, Change Notice 1



LOGIC LEGEND

Key	Bits	Bits
	765	765
Shift	110	100(16 characters)
	111	101(1st 15 characters)
		(last character of 111 on separate key)
		(last character of 101 in lower case)
	011	010(1st 12 characters)
	010	011(14th and 16th characters)
	011	(13th and 15th characters on special keys)
	010	010(13th and 15th characters duplicated in upper and lower case)
Control	110	000(16 characters)
	111	001(1st 15 characters)
	101	001(last character)

OPERATING LEGEND

1. Shift produces upper character on the key top (not within the small square) or upper case of a letter.
2. Unshift produces lower character on the key top or lower case of a letter.
3. Control (CTL) produces the character within the small square on the key top.

Figure 1 Four Row Keyboard

MCSTSC Position on Keyboards

1. Incl 1 is the DOD basic standard keyboard for implementing ASCII.

2. The MCSTSC does not object to making changes in this standard in the event ASA and ISO do not agree with all details of our keyboard. This we consider likely (lack of agreement).

3. The MCSTSC believes that a family of keyboards will ultimately be required. One of these keyboards will be the same or similar to Incl 1. Another will be a numeric cluster keyboard. One or more others will be required for accounting machines. It is likely that there will be many special purpose keyboards.

4. The MCSTSC favors the "hard core" used in Incl 1 and in the proposed ASA Standard Keyboard Arrangement.

5. The MCSTSC desires that the location of CR, LF, control, shift, and shift lock be standardized if at all possible to obtain agreement.

6. The location of the seldomly used character keys should be standardized as to preferred location with a provision that they may be omitted as desired. Omitting some may require movement of others to a location other than the preferred location. This seems to be unavoidable if we are to allow flexibility.

7. The MCSTSC favors the arrangement whereby controls appear on other keytops (such as SOH on A) and that their signals be generated by pushing the appropriate key in conjunction with a "control" key. Controls deemed important enough to put on separate keys should have a preferred position. Such a list of controls recommended for separate keys should be prepared but not made mandatory. Thus there would be a variable number of control keys along the outer edge of each side, depending upon requirements.

8. The MCSTSC favors in general the one-bit or two-bit shift principle of pairing or tripling characters on key tops.

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B65 DATA KEYBOARD ARRANGEMENT X4A9-1/